

Ballona Wetlands Historical Baseline and Truth Maintenance Analysis

A Truth Maintenance Failure in Environmental Regulatory Process

Version 1.9.13 FINAL

Executive Summary

The Ballona Wetlands restoration project cannot logically claim to "restore historical conditions" because the proponents' own documents contain fundamental contradictions about what those historical conditions were.[2][3][4][5] This is not a dispute over restoration philosophy—it is a **failure** of narrative truth maintenance[1] where mutually incompatible claims are carried forward simultaneously, never reconciled, and work proceeds as if there is no logical problem.[2][4][5]

Additionally, the California Department of Fish and Wildlife (CDFW) selected a "historical baseline" period (1850–1890) that occurs **25–65 years after** the most significant natural hydrological change in the Los Angeles coastal plain: the 1815–1825 Los Angeles River diversions.[16] This methodological decision means the baseline period itself represents fundamentally altered conditions, not pre-disturbance hydrology.

Scope of This Report

This report evaluates the internal logical consistency of historical claims used to justify the Ballona Wetlands Restoration Project.[2][3][4] It does not advocate for or against any specific restoration alternative, nor does it evaluate ecological desirability, engineering feasibility, or regulatory compliance.[2][4]

The Claimed Narrative Chain

Across CDFW and environmental NGO materials, the justification follows this logical structure:[2][4][6]

Premise A: The restoration is called "Full Tidal Restoration" and described as "returning" tidal waters,[4] language that implies the wetlands were historically a fully tidal, open estuary.

Premise B: Human alterations (1825 LA River relocation, 1930s–1940s Ballona Creek channelization) severed or degraded that tidal connection.[2][4][7]

Conclusion: Therefore, restoring full tidal exchange is necessary to "restore historical conditions." [4][6]

This chain **requires all three propositions to be simultaneously true**. They are not. [2][4][5]

Key Breaks in the Narrative Chain

1. Their Own Documents Contradict "Open Estuary" Claim

CDFW's own FAQ and project materials concede that after the LA River shifted south in 1825, Ballona was a **bar-built estuary whose mouth was "often closed to the ocean by a sand berm,"** only occasionally scoured open during high flows. [4] That is not a permanently open, fully tidal estuary; it is an **intermittently closed lagoon system**. [2][8]

A detailed 1887 historical account (within their chosen 1850–1890 baseline period) provides this vivid description: [5]

"Four miles southwest of Santa Monica, and ten miles southeast of Los Angeles, lying in the shelter of a low range of hills rising from the valley toward the sea, is a small narrow lake at the point where La Ballona creek debonches into the ocean. It is a true lake, for, although it lies close down upon the sand of the beach, a well-defined earth formation encloses it, and proves conclusively that it's [sic] water is not drawn by seepage from the sea." [5]

"Back of the lake there is a drift of sand-hills so common along the seacoast of Southern California, and behind these hills there stretch away for miles the low marsh lands of the Centinela ranch. La Ballona creek comes down through this marsh—which is, after all, only a wash of sediment from the hills and higher plains toward Los Angeles—and in the rainy season, the creek breaks through the sand-hills, and the waters overflow the lake and find an outlet to the ocean." [5]

This contemporaneous description makes clear: [5]

- "A true lake" – explicitly characterized as lacustrine, not estuarine.
- "Well-defined earth formation encloses it" – physically separated from the ocean.
- Water "not drawn by seepage from the sea" – definitively non-marine source.
- Sand-hills block ocean access – barrier beach configuration.
- "Creek breaks through" only in rainy season – seasonal, not permanent connection.
- Waters "find an outlet" – ephemeral breach, not a maintained channel.

This is the textbook description of a **bar-built lagoon with seasonal breaching**, not a permanently open tidal estuary. [5][8]

The same historical source describes human management of the seasonal closure:[5]

"Duck shooting on Ballona laguna and boating on the laguna were popular pastimes. The boats on the laguna known as the Pollywog and the Mud Hen. Spanish games took place in the spring, when a channel was cut from the laguna to allow the overflow water to escape into the ocean, at the point now known as Playa del Rey."[5]

"A channel was cut from the laguna" indicates the lagoon was normally **closed** to the ocean and required **deliberate human intervention** to create an outlet.[5] The "Spanish games" tradition of spring channel-cutting demonstrates that ocean connection was:

- Not natural or continuous.
- Seasonal and event-driven (spring overflow).
- Requiring active maintenance (cutting a channel).
- A recreational/cultural practice associated with periodic breaching.[5]

These descriptions, drawn from Reference 4 (Ingersoll 1908) quoting an 1887 account, document conditions during CDFW's own chosen baseline period (1850–1890). The lagoon was **functionally closed** except during seasonal high flows or deliberate human intervention—a hydrological regime incompatible with the "Full Tidal Restoration" framework.[5]

2. CDFW Acknowledges "Often Closed" While Calling It "Full Tidal Restoration"

CDFW's own Final EIR (2019) contains explicit acknowledgment that the historical system was not a permanently open tidal estuary:[4]

"The historical conditions study (Dark et al. 2011) indicated that the inlet to Ballona Creek Estuary was **often closed to the ocean by a sand berm** and only scoured open during periods of high stream flow." (Final EIR, p. 3-7)[4]

Yet the same document—in fact, the same section—describes the restoration approach:[4]

"Full Tidal Restoration Alternative: This alternative **returns** a full tidal regime to the restored wetlands..." (Final EIR, p. ES-3)[4]

And later characterizes the [1930s] Ballona Creek [Flood Control] channel as:[4]

"...severing the wetlands from their **historic tidal connection** to the ocean." (Final EIR, p. 3-3)[4]

These statements cannot be reconciled:[1][4]

- You cannot "return" or "restore" a tidal connection that was historically **"often closed."**
- You cannot claim human intervention "severed" a connection that was naturally intermittent.
- You cannot describe permanent opening as restoring historical conditions while simultaneously acknowledging those conditions were seasonal closure.

This is the core truth maintenance failure.[1] These are not competing interpretations of ambiguous evidence—they are **mutually exclusive propositions** asserted simultaneously.

3. "Contrasts With Historic Conditions" Acknowledged, Then Ignored

CDFW's Final EIR explicitly acknowledges the contradiction:[4]

"The Ballona Creek inlet to the ocean would be permanently **maintained** as an open channel under this alternative, which **contrasts with historic conditions** when the connection was periodically blocked by a sand bar or berm." (Final EIR, p. 3-7)[4]

This statement concedes that the restoration design does **not** replicate historical conditions. Yet the project is still called "Full Tidal **Restoration**" and justified as necessary to restore what was lost.[4]

When an EIR states "our proposed action contrasts with historic conditions" while simultaneously labeling that action "restoration," the narrative chain has failed.[1] Either:

- It is restoration (recreating what existed), **OR**
- It contrasts with historic conditions (creating something different)

Both cannot be true.[1] Proceeding as if there is no contradiction does not resolve the logical problem—it demonstrates the absence of truth maintenance.[1]

4. Authoritative Nineteenth-Century Records Not Cited

The most detailed contemporaneous documentation of Ballona's hydrological condition during CDFW's chosen baseline period (1850–1890) comes from federal land surveys and court records that are not cited in CDFW's historical analysis:[13][14][15]

Hancock Survey (1858) – Official U.S. General Land Office Survey[14][15]

Henry Hancock's 1858 federal survey of Rancho La Ballona provides the authoritative legal description of the lagoon during the baseline period. His field notes record:[14]

"Laguna – Obstructed connection with the sea" (April 17, 1857 survey entry)[14]

Hancock's plat map (July 1858) depicts the lagoon as a closed freshwater body separated from the ocean by barrier dunes, with no mapped tidal channel.[15] This is the official federal baseline documentation—created specifically for legal land transfer under U.S. sovereignty and subject to rigorous verification standards.

Courtney Partition Map (1868) – Los Angeles Superior Court[13]

The 1868 partition map of Rancho La Ballona, prepared for the Estate of Machado probate proceedings in Los Angeles County Superior Court, shows the same configuration: a closed lagoon system with barrier beach separation from the ocean.[13] This legal partition required accurate boundary descriptions for property transfer, making it a high-reliability source.

These are not casual observations or anecdotal descriptions. They are **sworn legal documents** created for federal land patent and probate court proceedings—contexts requiring factual accuracy with legal consequences for error.[13][14][15] The absence of these authoritative sources from CDFW's historical analysis is a significant evidentiary gap.

Section 5: Baseline Period Selected After Major Natural Hydrological Change

The 1815–1825 Los Angeles River Diversions

CDFW's chosen baseline period (1850–1890) occurs **25–65 years after** the most significant natural hydrological change in the Los Angeles coastal plain: the 1815–1825 Los Angeles River diversions from its historical southward course through Dominguez Gap to San Pedro Bay, to its current westward course through the Los Angeles Narrows to Ballona Creek and Santa Monica Bay.[16]

This shift fundamentally altered regional hydrology, drainage patterns, sediment transport, and freshwater inputs across the entire coastal plain.[16] By selecting a baseline period that begins a quarter-century after this major natural disturbance, CDFW's historical analysis treats **post-disturbance conditions as the pre-disturbance baseline**. [16]

Evidence of Pre-1815 Southward LA River Course

Multiple lines of convergent evidence document the Los Angeles River's pre-1815 southward course:[16]

Geological Evidence

- Dominguez Gap paleovalley (subsurface channel filled with LA River alluvium)[16]
- Holocene sedimentological deposits consistent with sustained river flow through Dominguez Gap to San Pedro Bay[16]
- Geomorphological analysis of historic stream channels and alluvial fan patterns[16]

Spanish Colonial Land Grants

- Rancho San Pedro (1784 grant) boundaries follow watercourses incompatible with current LA River path[16]
- Land grant descriptions reference river crossings and boundaries that only make geographic sense with southward flow[16]

Spanish Expedition Accounts

- Father Juan Crespi's 1769 expedition journal describes river flowing "to the sea" in context consistent with San Pedro Bay drainage[16]
- Colonial-era maps and expedition routes document river-crossing locations incompatible with current westward course[16]

Documented Flood Chronology

- 1815, 1822, 1825 flood events progressively shifted river course from southward to westward flow[16]
- Contemporary Spanish and Mexican-era accounts document these diversions as significant events[16]
- Post-1825 maps consistently show the "new" westward course as distinct from earlier patterns[16]

Methodological Implications

Selecting 1850–1890 as the "historical baseline" for Ballona Wetlands means CDFW's analysis treats conditions shaped by the post-1815 LA River diversion as representative of pre-disturbance hydrology.[16] This is methodologically problematic because:[16]

1. The baseline period itself represents fundamentally altered hydrological conditions.
2. Pre-1815 conditions (when the LA River flowed south, not west through Ballona) are excluded from consideration.
3. Changes attributed to "human alteration" (1825 channel relocation, 1930s flood control) occurred in a system already transformed by major natural diversion events.

A true pre-disturbance baseline would need to account for the 1815–1825 river diversions as the primary hydrological change event, not treat post-diversion conditions as the reference state.[16]

For comprehensive documentation of the Los Angeles River's pre-1815 southward course, including detailed geological evidence, Spanish colonial land grants, sedimentological analysis, and cartographic documentation, see:

McMahon, Tom. "The Los Angeles River Flowed South to Dominguez, Carson and San Pedro Prior to 1815." Version 2.6.35_FINAL. February 13, 2026. Available at: [Internet Archive - Los Angeles River Pre-1815 Analysis](#)

Procedural Context: Why This Matters Beyond Academic Debate

Truth maintenance failures[1] in environmental review have regulatory consequences under CEQA (California Environmental Quality Act) and NEPA (National Environmental Policy Act):[9][10]

- **CEQA requires analysis based on "substantial evidence."**[9] Mutually contradictory baseline claims cannot constitute substantial evidence.
- **NEPA requires "high quality" information and "accurate scientific analysis."**[10] A narrative that simultaneously claims full tidal conditions existed and did not exist fails this standard.
- **Both statutes prohibit agencies from proceeding when baseline conditions are disputed or inadequately established.**[9][10]

When project proponents cannot maintain internal consistency about what they claim to be restoring, regulatory agencies cannot make informed decisions about project necessity, environmental impacts, or mitigation requirements.[9][10]

Distinction: Historical Restoration vs. Novel Ecological Engineering

There is nothing inherently wrong with creating a **new** tidal wetland system where none existed before—this is ecological engineering, a legitimate and often valuable practice.[11][12] But calling it "restoration" while simultaneously acknowledging historical conditions were different is both factually incorrect and procedurally problematic.[2][4]

If CDFW and project proponents acknowledged: "We are creating a permanently open tidal estuary, which differs from the historically documented bar-built lagoon system with intermittent closure," the project could be evaluated on its ecological merits without false historical claims.[4][11] The current approach—simultaneously claiming restoration of historical conditions while citing sources that contradict those conditions—creates regulatory confusion and undermines informed public participation.[9][10]

Conclusion

The Ballona Wetlands Restoration Project's historical justification fails basic truth maintenance[1] because:

1. CDFW's own cited Reference (Dark et al. 2011) documents the system was "often closed." [4]
2. CDFW's own EIR acknowledges permanent opening "contrasts with historic conditions." [4]
3. CDFW simultaneously calls the project "Full Tidal Restoration" and describes it as "returning" tidal waters. [4]
4. Contemporaneous 1858 federal survey documents (Hancock field notes and plat) and 1887 historical accounts (Ingersoll) describe a closed lagoon system with seasonal breaching. [5][14][15]
5. Authoritative nineteenth-century court and federal land records from the baseline period (Hancock 1858, Courtney 1868) are not cited in CDFW's historical analysis. [13][14][15]
6. The chosen baseline period (1850–1890) occurs 25–65 years after major natural hydrological changes (1815–1825 LA River diversions), meaning the baseline itself represents post-disturbance conditions. [16]

These are not interpretation disputes. They are logical contradictions that cannot be reconciled. Proceeding with restoration work under these conditions violates the truth maintenance requirement [1] necessary for sound environmental review. [9][10]

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